

ABSTRACT

An acoustic wave identification transponder device, having a substrate, an electroacoustic transducer generating an acoustic wave in said substrate and a set of encoding elements disposed in a path of the acoustic wave for modifying the acoustic wave, having elements which reflect portions of the acoustic wave having a component orthogonal to the incident wave. The reflectors may be, for example, trackchangers or reflective arrays compressors (RAC). The wave may be phase-amplitude modulated for increased efficiency expressed in bits per tap. Such phase amplitude modulation is preferably imposed by partial beam width phase delay elements disposed within an acoustic beam path.